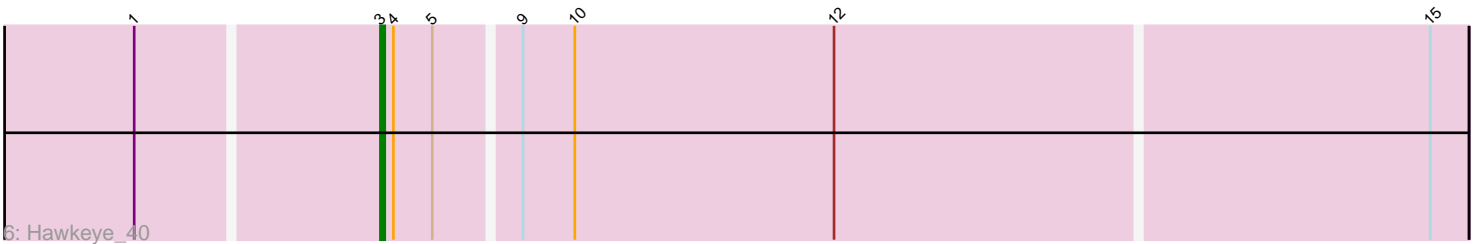
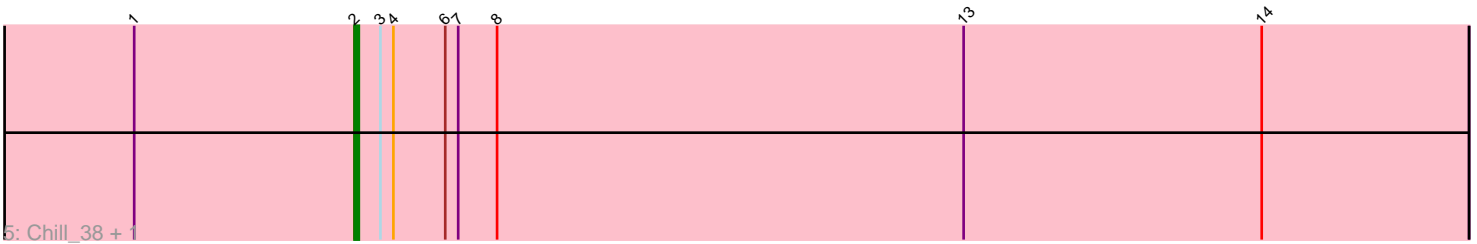
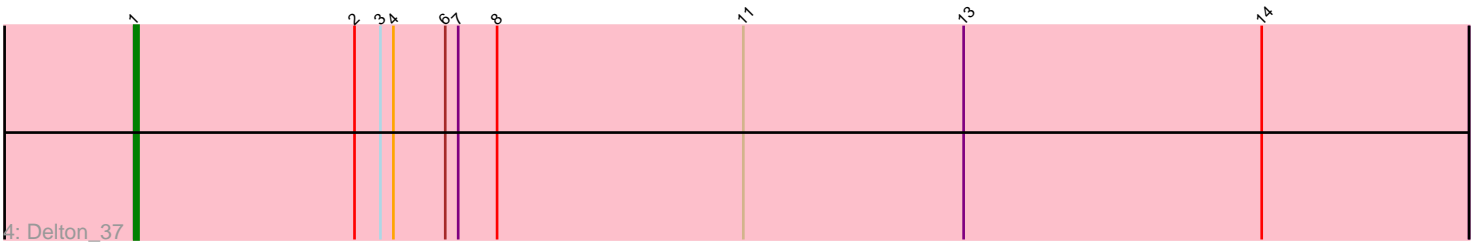
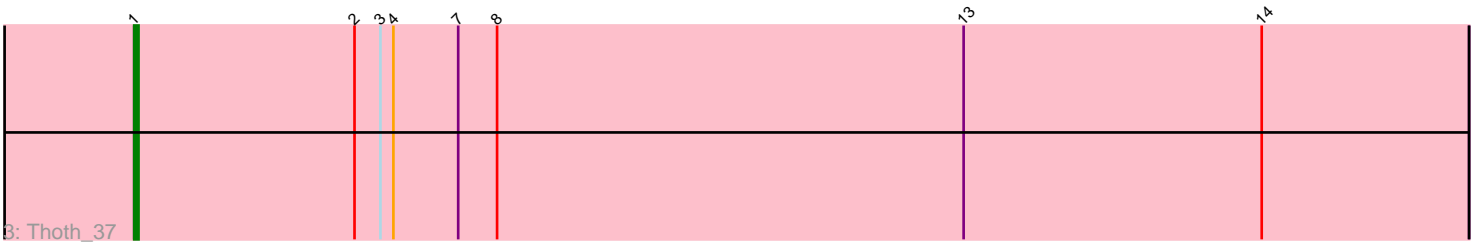
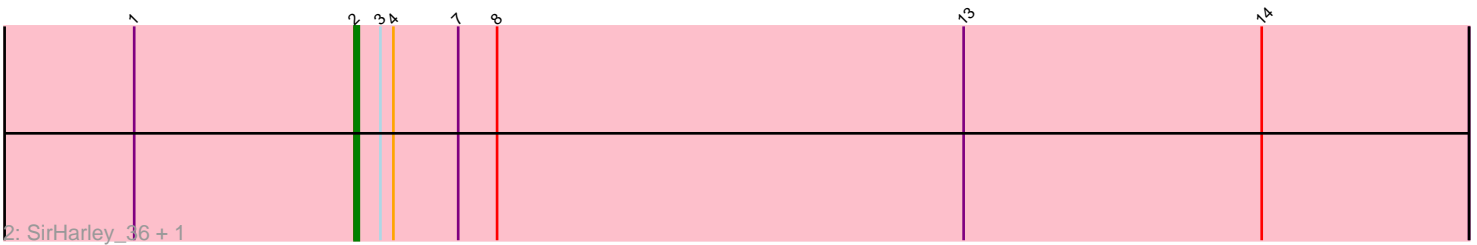
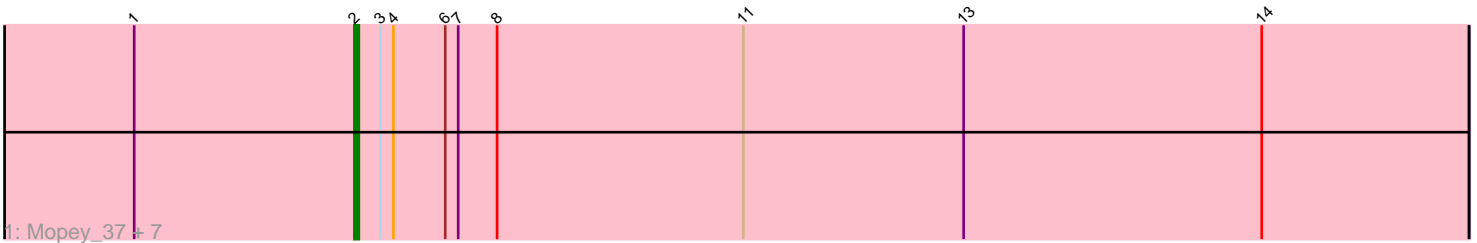


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Note: Tracks are now grouped by subcluster and scaled. Switching in subcluster is indicated by changes in track color. Track scale is now set by default to display the region 30 bp upstream of start 1 to 30 bp downstream of the last possible start. If this default region is judged to be packed too tightly with annotated starts, the track will be further scaled to only show that region of the ORF with annotated starts. This action will be indicated by adding "Zoomed" to the title. For starts, yellow indicates the location of called starts comprised solely of Glimmer/GeneMark auto-annotations, green indicates the location of called starts with at least 1 manual gene annotation.

## Pham 4636 Report

This analysis was run 04/05/24 on database version 557.

Pham number 4636 has 15 members, 1 are drafts.

Phages represented in each track:

- Track 1 : Mopey\_37, Penelope2018\_37, BigMama\_35, Prager\_37, Giuseppe\_37, Helpful\_38, Visconti\_37, Troll4\_37
- Track 2 : SirHarley\_36, KandZ\_37
- Track 3 : Thoth\_37
- Track 4 : Delton\_37
- Track 5 : Chill\_38, WaldoWhy\_38
- Track 6 : Hawkeye\_40

### ***Summary of Final Annotations (See graph section above for start numbers):***

The start number called the most often in the published annotations is 2, it was called in 11 of the 14 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- BigMama\_35, Chill\_38, Giuseppe\_37, Helpful\_38, KandZ\_37, Mopey\_37, Penelope2018\_37, Prager\_37, SirHarley\_36, Troll4\_37, Visconti\_37, WaldoWhy\_38,

Genes that have the "Most Annotated" start but do not call it:

- Delton\_37, Thoth\_37,

Genes that do not have the "Most Annotated" start:

- Hawkeye\_40,

### **Summary by start number:**

Start 1:

- Found in 15 of 15 ( 100.0% ) of genes in pham
- Manual Annotations of this start: 2 of 14
- Called 13.3% of time when present
- Phage (with cluster) where this start called: Delton\_37 (D1), Thoth\_37 (D1),

Start 2:

- Found in 14 of 15 ( 93.3% ) of genes in pham
- Manual Annotations of this start: 11 of 14

- Called 85.7% of time when present
- Phage (with cluster) where this start called: BigMama\_35 (D1), Chill\_38 (D1), Giuseppe\_37 (D1), Helpful\_38 (D1), KandZ\_37 (D1), Mopey\_37 (D1), Penelope2018\_37 (D1), Prager\_37 (D1), SirHarley\_36 (D1), Troll4\_37 (D1), Visconti\_37 (D1), WaldoWhy\_38 (D1),

Start 3:

- Found in 15 of 15 ( 100.0% ) of genes in pham
- Manual Annotations of this start: 1 of 14
- Called 6.7% of time when present
- Phage (with cluster) where this start called: Hawkeye\_40 (D2),

### **Summary by clusters:**

There are 2 clusters represented in this pham: D2, D1,

Info for manual annotations of cluster D1:

- Start number 1 was manually annotated 2 times for cluster D1.
- Start number 2 was manually annotated 11 times for cluster D1.

Info for manual annotations of cluster D2:

- Start number 3 was manually annotated 1 time for cluster D2.

### **Gene Information:**

Gene: BigMama\_35 Start: 31534, Stop: 31791, Start Num: 2

Candidate Starts for BigMama\_35:

(Start: 1 @31483 has 2 MA's), (Start: 2 @31534 has 11 MA's), (Start: 3 @31540 has 1 MA's), (4, 31543), (6, 31555), (7, 31558), (8, 31567), (11, 31624), (13, 31675), (14, 31744),

Gene: Chill\_38 Start: 31524, Stop: 31781, Start Num: 2

Candidate Starts for Chill\_38:

(Start: 1 @31473 has 2 MA's), (Start: 2 @31524 has 11 MA's), (Start: 3 @31530 has 1 MA's), (4, 31533), (6, 31545), (7, 31548), (8, 31557), (13, 31665), (14, 31734),

Gene: Delton\_37 Start: 31479, Stop: 31787, Start Num: 1

Candidate Starts for Delton\_37:

(Start: 1 @31479 has 2 MA's), (Start: 2 @31530 has 11 MA's), (Start: 3 @31536 has 1 MA's), (4, 31539), (6, 31551), (7, 31554), (8, 31563), (11, 31620), (13, 31671), (14, 31740),

Gene: Giuseppe\_37 Start: 31519, Stop: 31776, Start Num: 2

Candidate Starts for Giuseppe\_37:

(Start: 1 @31468 has 2 MA's), (Start: 2 @31519 has 11 MA's), (Start: 3 @31525 has 1 MA's), (4, 31528), (6, 31540), (7, 31543), (8, 31552), (11, 31609), (13, 31660), (14, 31729),

Gene: Hawkeye\_40 Start: 31691, Stop: 31936, Start Num: 3

Candidate Starts for Hawkeye\_40:

(Start: 1 @31637 has 2 MA's), (Start: 3 @31691 has 1 MA's), (4, 31694), (5, 31703), (9, 31721), (10, 31733), (12, 31793), (15, 31928),

Gene: Helpful\_38 Start: 31518, Stop: 31775, Start Num: 2

Candidate Starts for Helpful\_38:

(Start: 1 @31467 has 2 MA's), (Start: 2 @31518 has 11 MA's), (Start: 3 @31524 has 1 MA's), (4, 31527), (6, 31539), (7, 31542), (8, 31551), (11, 31608), (13, 31659), (14, 31728),

Gene: KandZ\_37 Start: 31618, Stop: 31875, Start Num: 2

Candidate Starts for KandZ\_37:

(Start: 1 @31567 has 2 MA's), (Start: 2 @31618 has 11 MA's), (Start: 3 @31624 has 1 MA's), (4, 31627), (7, 31642), (8, 31651), (13, 31759), (14, 31828),

Gene: Mopey\_37 Start: 31518, Stop: 31775, Start Num: 2

Candidate Starts for Mopey\_37:

(Start: 1 @31467 has 2 MA's), (Start: 2 @31518 has 11 MA's), (Start: 3 @31524 has 1 MA's), (4, 31527), (6, 31539), (7, 31542), (8, 31551), (11, 31608), (13, 31659), (14, 31728),

Gene: Penelope2018\_37 Start: 31518, Stop: 31775, Start Num: 2

Candidate Starts for Penelope2018\_37:

(Start: 1 @31467 has 2 MA's), (Start: 2 @31518 has 11 MA's), (Start: 3 @31524 has 1 MA's), (4, 31527), (6, 31539), (7, 31542), (8, 31551), (11, 31608), (13, 31659), (14, 31728),

Gene: Prager\_37 Start: 31530, Stop: 31787, Start Num: 2

Candidate Starts for Prager\_37:

(Start: 1 @31479 has 2 MA's), (Start: 2 @31530 has 11 MA's), (Start: 3 @31536 has 1 MA's), (4, 31539), (6, 31551), (7, 31554), (8, 31563), (11, 31620), (13, 31671), (14, 31740),

Gene: SirHarley\_36 Start: 31450, Stop: 31707, Start Num: 2

Candidate Starts for SirHarley\_36:

(Start: 1 @31399 has 2 MA's), (Start: 2 @31450 has 11 MA's), (Start: 3 @31456 has 1 MA's), (4, 31459), (7, 31474), (8, 31483), (13, 31591), (14, 31660),

Gene: Thoth\_37 Start: 31464, Stop: 31772, Start Num: 1

Candidate Starts for Thoth\_37:

(Start: 1 @31464 has 2 MA's), (Start: 2 @31515 has 11 MA's), (Start: 3 @31521 has 1 MA's), (4, 31524), (7, 31539), (8, 31548), (13, 31656), (14, 31725),

Gene: Troll4\_37 Start: 31519, Stop: 31776, Start Num: 2

Candidate Starts for Troll4\_37:

(Start: 1 @31468 has 2 MA's), (Start: 2 @31519 has 11 MA's), (Start: 3 @31525 has 1 MA's), (4, 31528), (6, 31540), (7, 31543), (8, 31552), (11, 31609), (13, 31660), (14, 31729),

Gene: Visconti\_37 Start: 31528, Stop: 31785, Start Num: 2

Candidate Starts for Visconti\_37:

(Start: 1 @31477 has 2 MA's), (Start: 2 @31528 has 11 MA's), (Start: 3 @31534 has 1 MA's), (4, 31537), (6, 31549), (7, 31552), (8, 31561), (11, 31618), (13, 31669), (14, 31738),

Gene: WaldoWhy\_38 Start: 31524, Stop: 31781, Start Num: 2

Candidate Starts for WaldoWhy\_38:

(Start: 1 @31473 has 2 MA's), (Start: 2 @31524 has 11 MA's), (Start: 3 @31530 has 1 MA's), (4, 31533), (6, 31545), (7, 31548), (8, 31557), (13, 31665), (14, 31734),